Background

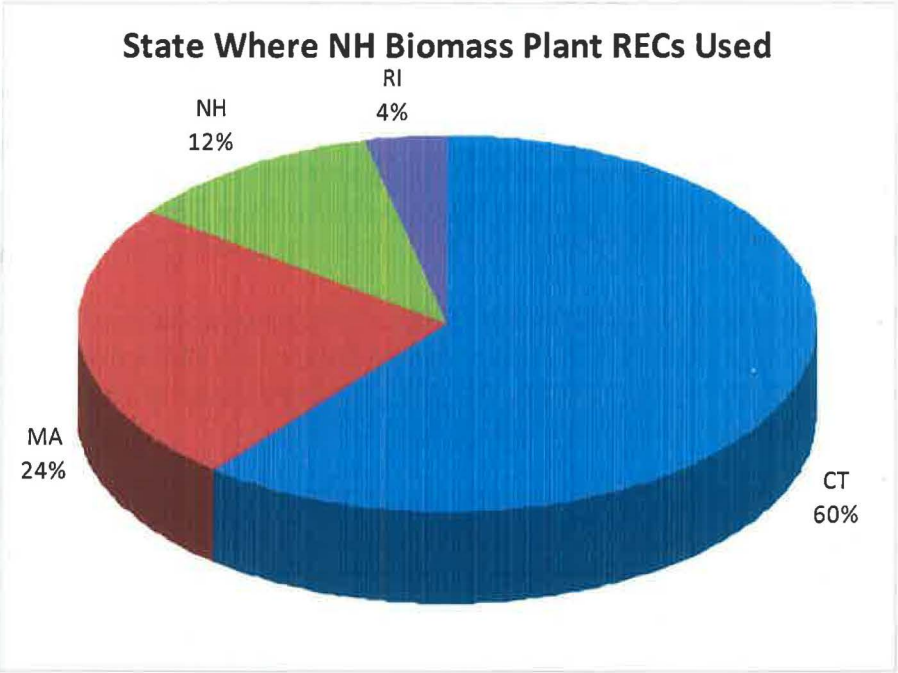
New Hampshire currently has 7 operating electric generating units (EGUs) fueled with waste wood chips. These plants include:

- PSNH - Schiller Station Unit 5, Portsmouth (50 MW, generation capacity)
- Bridgewater Power LP, Bridgewater (15 MW)
- Springfield Power LLC, Springfield (13.8 MW)
- Pinetree Power, Bethlehem (15 MW)
- Pinetree Power, Tamworth (20 MW)
- DG Whitefield LLC, Whitefield (13.8 MW)
- Indeck Energy - Alexandria LLC, Alexandria (15 MW)

In addition there are two other facilities in Hopkinton and Pittsfield that have closed, and the new 70 MW Burgess BioPower plant in Berlin is anticipated to begin generating RECs soon. As documented below, these plants play a significant role in addressing the state's climate action and renewable energy goals. Additionally they provide economic stimulus in the northern tier of the state, and help to create a market for low-grade wood products as part of an overall approach to long-term forest management in New Hampshire and northern New England.

Of the seven operating wood plants, all but two, Bridgewater Power and Whitefield are currently eligible to receive RECs pursuant to New Hampshire's RPS. Schiller qualifies as a Class I (New) eligible facility, while the others qualify as Class III (Existing Biomass/Methane) eligible facilities. Some of these plants also currently qualify for RECs under both the Massachusetts and Connecticut RPS programs (a facility may only sell its eligible RECs under one state RPS program, and chooses which one based on the value in each market).

The participation of New Hampshire facilities in the Massachusetts and Connecticut markets, which have higher alternative compliance payments (ACPs), and resulting higher REC values, was the primary factor in the payment of over $15 million to the Renewable Energy Fund for Class III ACPs for calendar year 2011 (this issue was addressed by both PUC order and legislation in the 2013 session). However, both Massachusetts and Connecticut are currently revising their programs relative to biomass generation such that participation in those markets by New Hampshire wood plants would be either operationally or economically infeasible as early as 2015. The chart below shows the 2012 distribution of New Hampshire biomass plant RECs in New England.



In summary, New Hampshire's wood-fired power plants have a total capacity of nearly 142 MW out of a net (summer) generating capacity of 4,180 MW, and a five year average annual generation of approximately 1 million MWh out of total annual New Hampshire retail sales of approximately 10.9 million MWh (EIA 2010) and New Hampshire generation of 22.2 million MWh. In addition the plants provide a significant economic impact, estimated by the New Hampshire Timberland Owners Association (NHTOA) at over $1 billion in direct economic activity and fees/taxes paid, and over $3.5 billion of indirect impacts in support of the non-biomass timber and recreational/tourism sectors.

A 2002 report[3] commissioned by the Department of Resources and Economic Development states:

> "*This report documents the third phase of a study ...to identify and begin to develop alternative markets for low-grade wood. Phases 1 and 2 of the study evaluated the technical and economic feasibility of over a dozen possible markets, and reached the following conclusion:*
>
> ***In the foreseeable future, no other market exists to replace wood-fired electricity as an outlet to consume significant volumes of low-grade wood in New Hampshire***".

A 2007 report[4] of the Northeast State Foresters Association further states:

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[3] *Identifying and Implementing Alternatives to Sustain the Wood-fired Electricity Generating Industry in New Hampshire- Phase III of a Project*, available at http://inrsllc.com/download/wood_firedelectricityinNH.pdf

> *"The six biomass plants (again, including the Schiller facility that began operation in late 2006) consume 1.7 million tons of chips per year. The biomass market provides an important outlet for low-grade wood allowing for improvement of the overall quality of the forests and provides a market for a material that is neither suitable nor economical to process for lumber or paper. Revenues from sales of biomass chips in 2005 totaled $30 million (assuming $25.00/ton) or $42.5 million if we include the Schiller plant."*

Analyses of the forest ecosystem conducted in 2008 by UNH-based Carbon Solutions New England for the New Hampshire Climate Change Policy Task Force determined that sustainably managed forests in New Hampshire provide a broad range of ecosystem goods and services ("ecosystem services") including:

a. A significant net carbon benefit through carbon sequestration and storage;
b. Biomass which can be used for a variety of forest products;
c. A range of ecological functions including water cycle regulation, watershed protection, and wildlife habitat; and
d. Various recreational opportunities.

Avoiding forest land conversion has a significant net carbon benefit. Increasing the rate of timber harvest without changing wood use or forested land loss reduces the rate of carbon sequestration and total carbon storage in the short-term and leads to a higher sequestration rate over the long-term. Reallocating non-durable grade wood to biomass energy (e.g., electric generation, heating) results in a significant positive carbon benefit and can provide a resource that complements expanded energy efficiency and energy conservation programs and generation by other forms of renewables. Sustainably managed forests possess a significant economic development potential. The maintenance of working forests is an essential mechanism to provide value to forested lands and avoid forested land conversion.

The Task Force concluded that wood-fired electric generating units would contribute to achieving both EGU Action 2.4 (Address Barriers to Low- and Non-CO_2-Emitting Electric Generation and AFW Action 2.2.1 (Maintain Infrastructure for Biomass Production and Support Regulatory and Business Efficiencies)[5].

In conclusion, the wood-fired electric generation industry in New Hampshire plays a significant role in achieving New Hampshire's energy, environmental, and economic goals.

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[4] *The Economic Importance and Wood Flows from New Hampshire's Forests, 2007*, available at http://inrsllc.com/download/Nefa_Publications/NEFAEconomicImportNH.pdf

[5] Available at http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/032509_nhccptf_appendix_4.2.pdf (p. 10) and http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/documents/032509_nhccptf_appendix_4.7.pdf (p. 10)

Appendix 1
Connecticut Section 8 Procurement – Overall Ranking

Rank	Project Name	Sponsor	Term	Start	Product	Tech	Status	Loc	MW	Max Annual MWh	Cum MWh/yr	Cum % of Load	Avg Price ($/MWh)	Cum PV of Net Benefits ($MM)	Non Price Score	Total Score Points
1	Schiller Unit 5	PSNH	10	Jan-16	R	Biomass	Exist	NH	21.50	161,972	161,972	0.59%	$ 24.84	12.94	8.06	83.06
2	Joseph C. McNeil Generating Station	BED	5	Jan-15	R	Biomass	Exist	VT	5.00	26,918	188,890	0.69%	$ 22.50	14.21	7.41	82.35
3	Joseph C. McNeil Generating Station	GMP	10	Aug-15	R	Biomass	Exist	VT	2.70	13,009	201,899	0.73%	$ 27.00	15.11	7.41	80.53
4	Taunton	Tauton	5	Jan-15	R	LFG	Exist	MA	2.00	14,953	216,852	0.79%			8.53	76.37
5	Joseph C. McNeil Generating Station	VPPSA	10	Jan-17	R	Biomass	Exist	VT	5.00	27,000	243,851	0.89%			7.41	74.32
6	ReEnergy Stratton Facility (Part 1)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	2.00	16,900	260,751	0.95%			4.57	73.94
7	ReEnergy Fort Fairfield Facility (Part 1)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	2.00	16,877	277,628	1.01%			4.14	73.51
8	Plainfield Renewable Energy, LLC	Plainfield	10	Jul-14	ERC	Biomass	New	CT	7.50	59,263	336,891	1.22%			21.55	73.03
9	ReEnergy Livermore Falls Facility (Part 1)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	2.00	17,160	354,051	1.29%			2.84	72.21
10	Joseph C. McNeil Generating Station	GMP	10	Aug-15	R	Biomass	Exist	VT	9.00	43,449	397,500	1.44%			7.41	71.19
11	Pinetree Power-Fitchburg, Inc.	GDF Suez	10	Jan-15	ERC	Biomass	Exist	MA	16.62	129,504	527,004	1.92%			11.29	70.70
12	Bulls Bridge Station	GDF Suez	10	Jul-14	ERC	RR Hydro	Exist	CT	8.40	42,524	569,528	2.07%			15.43	69.64
13	Tunnel Station	GDF Suez	10	Jul-14	ERC	RR Hydro	Exist	CT	2.10	9,181	578,709	2.10%			15.43	67.64
14	Mill Hydroelectric Project	Kruger	10	Jan-18	ER	RR Hydro	Cap Exp	NY	6.20	26,000	604,709	2.20%			15.13	67.44
15	Gouldtown Hydroelectric Project	Kruger	10	Jul-14	ER	RR Hydro	Exist	NY	2.00	11,050	615,759	2.24%			9.48	67.22
16	ReEnergy Stratton Facility (Part 2)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	45.00	321,100	936,859	3.40%			4.57	66.97
17	Falls Village Station	GDF Suez	10	Jul-14	ERC	RR Hydro	Exist	CT	11.10	44,054	980,913	3.56%			15.43	66.14
18	ReEnergy Sterling Facility	ReEnergy	10	Oct-17	ERC	Biomass	Cap & Env	CT	32.00	257,800	1,238,713	4.50%			19.57	65.58
19	ReEnergy Livermore Falls Facility (Part 2)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	35.00	268,840	1,507,553	5.48%			2.84	63.38
20	North Hartland Hydroelectric Generating	North Hartland	10	Jan-16	R	RR Hydro	Exist	VT	3.08	10,646	1,518,199	5.52%			9.74	62.56
21	Taftville Station	GDF Suez	10	Jul-14	ERC	RR Hydro	Exist	CT	2.00	6,102	1,524,301	5.54%			15.43	62.51
22	ReEnergy Fort Fairfield Facility (Part 2)	ReEnergy	10	Apr-17	R	Biomass	Exist	ME	30.00	224,223	1,748,524	6.35%			4.14	61.89
23	Bridgewater	Bridgewater	10	Jan-15	R	Biomass	Exist	NH	15.60	126,682	1,875,206	6.81%			7.20	61.01
24	Bethlehem Generating Facility	GDF Suez	10	Jan-15	ERC	Biomass	Exist	NH	15.55	125,748	2,000,954	7.27%			6.77	55.48
25	Springfield	Springfiled	10	Jan-15	ER	Biomass	Exist	NH	17.50	135,000	2,135,954	7.76%			6.98	46.72
26	Whitefield	DG Whitefiled	10	Jan-16	ER	Biomass	Exist	NH	17.50	94,000	2,229,954	8.10%			3.10	37.88
27	Indeck Alexandria Energy Center	Indeck	10	Jul-14	ERC	Biomass	Exist	NH	15.00	111,690	2,341,644	8.51%			6.34	34.47
28	Winston	Winston	10	May-15	ER	RR Hydro	New	QC	2.20	9,160	2,350,804	8.54%			11.38	16.82